

AMENDMENTS TO THE SPECIFICATION

Please add the following Abstract to the application:

ABSTRACT

There is disclosed a laser comprising a laser medium comprising $H_2(1/p)$ where p is an integer and $1 \leq p \leq 137$, a cavity comprising the laser medium, and a power source to form an inverted population in the energy level of $H_2(1/p)$. The power source may form excited vibration-rotational levels of $H_2(1/p)$ wherein lasing occurs with a stimulated transition from at least one vibration-rotational level to at least another lower-energy-level other than one with a significant Boltzmann population at the cell neutral-gas temperature, wherein the vibration-rotational levels of $H_2(1/p)$ comprise the inverted population.